## CLAIMS

1. An objective lens for an optical pickup device conducting at least reproducing and/or recording of information for a first optical disc having a protective base board thickness t1 (0 mm ≤ t1 ≤ 0.2 mm) by using a light flux having a wavelength λ1 (370 nm ≤ λ1 ≤ 440 nm) and reproducing and/or recording of information for a second optical disc having a protective base board thickness t2 (t1 < t2) by using a light flux having a wavelength λ1, comprising:

a first zone defined as an area representing a designated area on an optical surface of the objective lens in which a light flux with the wavelength λ1 passing through the area is used for conducting reproducing and/or recording of information for the first and second optical discs,

wherein when a third optical disc having a protective base board thickness T (0.13 mm ≤ T ≤ 0.25 mm) is assumed, a $3^{rd}$ order spherical aberration value SA3 that is generated when a light flux having the wavelength λ1 passing through the first zone after entering the objective lens to be in parallel with an optical axis is converged on an information

recording surface of the third optical disc, satisfies the following expression.

$$-0.01\ \lambda rms \le SA3 \le 0.01\ \lambda rms$$

2. The objective lens according to claim 1, wherein when conducting reproducing and/or recording of information for the first optical disc, the light flux having the wavelength $\lambda 1$ enters the objective lens as convergent light.

3. The objective lens according to claim2, wherein optical system magnification m1 of the objective lens in the case of conducting reproducing and/or recording of information for the first optical disc satisfies $1/100 \le m1 \le 1/55$.

4. The objective lens according to claim 1, wherein the light flux having the wavelength $\lambda 1$ enters the objective lens as divergent light, when conducting reproducing and/or recording of information for the second optical disc.

5. The objective lens according to claim 4, wherein optical system magnification m2 of the objective lens in the case of conducting reproducing and/or recording of

information for the second optical disc satisfies $-1/15 \le m2 \le -1/50$.

6. The objective lens according to claim 1, wherein the first diffractive structure is provided on at least one optical surface of the objective lens, and the first diffractive structure has a positive diffracting power for the incident light flux having the wavelength $\lambda1$.

7. The objective lens according to claim 6, wherein the first diffractive structure has a function to correct chromatic aberration of the light flux having the wavelength $\lambda1$ in the case of conducting reproducing and/or recording of information for the first and second optical discs.

8. The objective lens according to claim 1, wherein focal length f of the objective lens for the light flux having wavelength $\lambda1$ satisfies $0.8 \text{ mm} \le f \le 3.5 \text{ mm}$.

9. The objective lens according to claim 1, wherein when an area that is a designated area on an optical surface of the objective lens and is an area utilized for conducting

reproducing and/or recording of information for the first optical disc for the light flux with wavelength λ1 which has passed through the area and is not utilized for conducting reproducing and/or recording of information for the second optical disc, is prescribed as a second zone, the second diffractive structure is provided on the second zone, and $B_4 < 0$ holds when the second diffractive structure is expressed as

$$\phi (h) = (B_2 \times h^2 + B_4 \times h^4 + \ldots + B_{2i} \times h^{2i}) \times \lambda \times n$$

by using optical path difference function $\phi$ (h).

In the aforesaid expression, h represents a height from an optical axis, $B_{2i}$ represents a coefficient of the optical path difference function, i represents a natural number, λ represents a working wavelength and n represents an order of diffraction of diffracted light having the maximum diffraction efficiency among diffracted light of an incident light flux.

10. The objective lens according to claim 1, wherein a light flux having the wavelength λ1 used for conducting reproducing and/or recording of information for the first optical disc and a light flux having the wavelength λ1 used

for conducting reproducing and/or recording of information for the second optical disc are emitted from the same light source.

11. The objective lens according to claim 10, wherein the light source or at least one optical element arranged in an optical path from the light source to the objective lens is moved in the direction of an optical axis when conducting reproducing and/or recording of information for the first optical disc and the second optical disc.

12. The objective lens according to claim 11, wherein the optical element is a coupling lens or a beam expander.

13. The objective lens according to claim 1, wherein a light flux having the wavelength $\lambda 1$ used for conducting reproducing and/or recording of information for the first optical disc and a light flux having the wavelength $\lambda 1$ used for conducting reproducing and/or recording of information for the second optical disc are emitted respectively from different light sources.

14. The objective lens according to claim 13, wherein the light source emitting the light flux having the wavelength $\lambda 1$ in the case of conducting reproducing and/or recording of information for the first optical disc is arranged to be farther from the objective lens in the optical axis direction than the light source emitting the light flux having the wavelength $\lambda 1$ in the case of conducting reproducing and/or recording of information for the second optical disc is.

15. The objective lens according to claim 14, wherein difference $\Delta L$ between optical distance L1 from the light source emitting a light flux with the wavelength $\lambda 1$ in the case of conducting reproducing and/or recording of information for the first optical disc and optical distance L2 from the light source emitting a light flux with the wavelength $\lambda 1$ in the case of conducting reproducing and/or recording of information for the second optical disc satisfies $4 \text{ mm} \leq \Delta L \leq 6 \text{ mm}$.

16. The objective lens according to claim 1, wherein the objective lens is composed of a single lens.

17. An optical pickup device equipped with the objective lens described in claim 1.